

Fig. 15. One of the cocoons, showing a protruding larva which is undergoing edysis. Part of the old skin (*x*) is retained above the tail.  $\times 3$  diam.

*m*, mouth; *sp*, spines; *bc*, buccal cup; *br*, buccal ring; *f*, funnel; *db*, dental bristles (position of); *ph*, pharynx; *rf*, radial fibres; *ab*, anterior bulb; *pb*, posterior bulb; *chp*, chitinous plates; *cht*, chitinous cylinder; *est*, chyle stomach; *l*, lumen of mid gut; *a*, anus; *ap*, anal prominence; *i*, intestine; *r*, rectum; *gstc*, gastro-intestinal gland-cells; *mb*, muscular bands; *mc*, muscle-cells; *c*, corpuscles; *sp*, spicules; *h*, hood; *rl*, right lobe; *ll*, left lobe; *thl*, third or middle lobe; *ar*, anterior ray; *alr*, antero-lateral ray; *mr*, middle ray; *plr*, postero-lateral ray; *pr*, posterior ray; *v*, vulva; *vg*, vagina; *e*, eggs; *int*, integument; *cu*, cuticle; *d*, dermis; *st*, striæ; *cgc*, colossal gland-cell; *cn*, cell-nucleus; *u*, uterus; *uh*, uterine horns; *ovt*, ovarian tube.

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Notes on Entomostraca collected by Mr. A. Haly in Ceylon.

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C.M.Z.S.

[Read 17th December, 1885.]

(PLATES XXXVII.—XL.)

THE Entomostraca here described belong to two sets of gatherings, one from fresh, the other from salt, water. The freshwater species were all taken at Colombo, but of the exact localities no record has been forwarded to me. The marine species, described in Part II. of this paper, were dredged in a depth of 2 fathoms off Calpentyn, in the Gulf of Manaar. For all of them I am indebted to the kindness of Mr. A. Haly, of the Colombo Museum.

Of the freshwater species, especially the Copepoda and Cladocera, the chief interest lies in their very near approach to well-known European species,—all the genera being represented in Northern Europe by species very closely resembling those of Ceylon. Amongst the Ostracoda is a curious form, for which I have thought it right to propose a new generic name, *Cyprinotus*. And, lastly, I have been able to add a little to the descriptions already given by Dr. Baird of two species, *Cypris cylindrica* (*C. Malcolmsoni*) and *C. (Chlamydotheca) subglobosa*.

The marine species are scarcely of so much interest. They include no new genus, but several new species are described, and some which have hitherto been only imperfectly known are, I think, placed on a more secure footing.

PART I.—*Fresh-water Species.*

## Subclass ENTOMOSTRACA.

## Legion BRANCHIOPODA.

## Order PHYLLOPODA.

## Family LIMNADIDÆ.

Genus LIMNADIA, *Brongniart.*

LIMNADIA HISLOPI (*Baird*). (Plate XXXVII. figs. 1–3.)

*Estheria Hislopi*, *Baird*, *Proc. Zool. Soc.* 1869 (Annulosa), pl. 63. fig. 1.

The Colombo specimens have been kindly compared for me by my brother, Mr. H. B. Brady, F.R.S., with the type specimens in the British Museum; there seems to be no appreciable difference except in the point of size, the types being somewhat larger. The Ceylon examples, however, are probably young ones, the shell being simply granular and showing no concentric ribs except in the largest of the lot, where the ridges are faintly visible. The smaller antennæ are distinctly club-shaped, a character which refers the animal to *Limnadia* rather than *Estheria*. Length  $\frac{8}{100}$  to  $\frac{1\frac{1}{2}}{100}$  of an inch (2–3 millim.).

## Order CLADOCERA.

## Family DAPHNIDÆ.

Genus MOINA, *Baird.*

MOINA SUBMUCRONATA, n. sp. (Plate XXXVII. figs. 4, 5.)

The cervical constriction is not nearly so deep as in the published figures of other *Moinæ*; the head is upright and subtriangular; the dorsal margin of the carapace almost straight, the ventral strongly arched, and forming at its junction with the posterior margin a more or less distinctly mucronate angle; posterior extremity truncated, but well rounded at the dorsal angle. Length (exclusive of antennæ)  $\frac{1}{25}$  of an inch (1 millim.).

## Family LYNCODAPHNIDÆ.

Genus ILYOCRYPTUS, *Sars.*

ILYOCRYPTUS HALYI, n. sp. (Plate XXXVII. figs. 6–9.)

The head is obtusely angular at the apex, not rounded;

posterior antennæ large, but not so excessively thick and muscular as in *I. sordidus*. Postabdomen consisting of two laminæ, each of which bears a long, slender, terminal claw, and behind this a series of twelve marginal curved spines, six long and six short alternately; following close upon these, and immediately behind the anal orifice, is another series of about twelve equal, but still shorter, spines, then a sinus corresponding with the intestinal outlet; between this and the anterior angle of the limb is another row of six larger and more widely separated spines, followed by a couple of long slender setæ. The carapace is marked within the posterior and ventral margins by several concentric lines, probably corresponding with periods of growth, and perhaps indicating also that the shell of this species does not undergo the normal periodical exuviation; the posterior and ventral margins of the carapace are densely fringed with plumose hairs, long on the ventral, but becoming gradually shorter towards the dorsal margin. The four-jointed branch of the large antenna has imperfectly marked divisions in the centre of each joint (fig. 7), giving it the appearance, under a low power, of being divided into eight joints. Length  $\frac{1}{28}$  of an inch (.98 millim.).

#### Genus *MACROTHRIX*, *Baird*.

*MACROTHRIX TRISERIALIS*, n. sp. (Plate XXXVII. figs. 16–20.)

The carapace seen laterally is subtriangular or heart-shaped, the posterior extremity tapered, angular and mucronate; the head is slightly produced into a triangular rostrum, from which depends the strap-like anterior antenna, serrated on its anterior margin and ending in three small setæ. The free margins of the carapace are serrated with short stout teeth, which run more or less distinctly in series of three (fig. 20), the intervals bearing long slender hairs. Length  $\frac{1}{24}$  of an inch (1.05 millim.).

#### Family *LYNCEIDÆ*.

#### Genus *ALONA*, *Baird*.

*ALONA ACANTHOCERCOIDES* (*Fischer*). (Plate XXXVIII. fig. 1.)

*Lynceus acanthocercoides*, *Fischer*, *Leydig*, *Norman*, and *Brady*.

*Eurycercus acanthocercoides*, *Schödler*.

*Alona acanthocercoides*, *P. E. Müller*.

*Leydigia acanthocercoides*, *Kurz*, *Herrick*.

## Order COPEPODA.

## Family CALANIDÆ.

Genus DIAPTOMUS, *Westwood*.

DIAPTOMUS ORIENTALIS, n. sp. (Plate XXXVII. figs. 21-26.)

Posterior margin of the last thoracic segment forming on each side a bidentate process, the outer angle of which is much larger than the inner. Abdomen of the female two-, of the male four-jointed. Anterior antenna 25-jointed, and as long as the cephalothorax; that of the right side in the male differs only slightly from the same organ in *D. castor*; the apical process of the twenty-third joint is, however, larger. The inner branch of the fifth foot of the female is considerably longer than in *D. castor*, and in the male the foot of each side consists only of a single branch. Length  $\frac{1}{20}$  of an inch (1·3 millim.).

## Family CYCLOPIDÆ.

Genus CYCLOPS, *Müller*.

CYCLOPS —, sp. (Plate XXXVIII. figs. 2-4.)

I figure the anterior antenna, fifth foot, and furca of a species which occurs abundantly in Mr. Haly's gatherings. It seems to be so nearly allied to several described species that, for the present, I do not assign it any specific name. The anterior antennæ are 17-jointed, and reach to the extremity of the second body-segment; the tail-segments about thrice as long as broad.

## Family HARPACTICIDÆ.

Genus ATTHEYELLA, *G. S. Brady*.

ATTHEYELLA CINGALENSIS, n. sp. (Plate XXXVII. figs. 10-15.)

This species is very similar to *A. spinosa*, but the fifth pair of feet are different, the inner branch of the first pair is three-jointed, those of the second and third pairs are two-jointed, the first joint very small; of the fourth pair one-jointed. Length of the animal  $\frac{1}{50}$  of an inch (·5 millim.).

Legion *LOPHYROPODA*.Order *OSTRACODA*.Family *CYPRIDIDÆ*.Genus *CYPRIS*, *Müller*.

*CYPRIS MALCOLMSONI*, *G. S. Brady*. (Plate XXXVIII. figs. 5-7.)

*Cypris cylindrica*, *Baird*, *Proc. Zool. Soc.* 1859, pl. 63. fig. 3.

I have been enabled to compare the Ceylon specimens with some from the Nagpur gathering, described by Dr. Baird, for which specimens, as well as for some of the fossil *C. cylindrica* collected by Dr. Malcolmson, I am indebted to my friend Professor T. Rupert Jones. The two series are undoubtedly identical; but I learn from my brother, Mr. H. B. Brady, that those preserved in the British Museum are much larger,—probably Baird's variety *major*\*.

The following brief description is drawn up from the Ceylon specimens:—

Shell elongated, subreniform, rather higher behind than in front; in lateral view the extremities are rounded, dorsum forming a flattened arch, almost or quite straight in the middle; ventral margin slightly sinuated in front of the middle; greatest height equal to rather more than one third of the length: seen from above, the outline is an extremely compressed oval, tapered towards the front; extremities subacuminate; width equal to more than one fourth of the length. Surface smooth and polished, mottled green. Length  $\frac{1}{12}$  of an inch (2.1 millim.). The terminal claws, as well as the posterior portion of the margin of the postabdominal rami, are beautifully pectinated (Plate XXXVIII. fig. 5); in other respects I have not found that the animal differs from a normal *Cypris*.

The shell has been well figured by Dr. Baird (*loc. cit.*). The species would seem to be abundant both at Colombo and at Nagpur, from which last-named locality Dr. Baird's specimens came.

\* I cannot, however, follow Dr. Baird in identifying the recent specimens with Sowerby's *C. cylindrica*, which, though very similar in general character, is smaller, higher in proportion to its length, considerably more tumid, and more rounded in its lateral contour.

## CYPRIS MONILIFERA, n. sp. (Plate XXXIX. figs. 10-12.)

Shell reniform: seen from the side the extremities are rounded and nearly equal, the posterior, however, somewhat flattened; dorsal margin boldly arched and almost gibbous in the middle, ventral deeply sinuated in the middle; height equal to more than half the length: seen from above, ovate, widest in the middle, tapered towards the anterior extremity, which is rounded, though much narrower than the posterior. On each valve a little within, and parallel to, the posterior margin, is a crescentic row of about six bead-like tubercles; otherwise the surface of the shell is quite smooth. Colour green. Length  $\frac{1}{3}$  of an inch (.77 millim.).

I have met with one specimen only of this species.

## CYPRIS LUXATA, n. sp. (Plate XXXVIII. figs. 8-11.)

Valves very unequal; the left much larger than the right, which it overlaps at all points, except the anterior portion of the dorsum: seen laterally, the shape is subreniform, of nearly equal height throughout; anterior extremity somewhat obliquely rounded, posterior oblique, subtruncate; dorsal margin very slightly arched, rather abruptly rounded off behind, ventral almost straight: seen from above, the outline is unequally ovate, the right side being much smaller than the left. Height equal to at least half, width equal to rather more than one third of the length. Surface of the shell smooth. Colour greenish-brown. Length  $\frac{1}{2}$  of an inch (.98 millim.).

## CYPRIS PURPURASCENS, n. sp. (Plate XXXVIII. figs. 12-14.)

Shell elongated, subovate, rather tumid: seen laterally, the outline is subelliptical with rounded extremities, the anterior extremity broad and evenly rounded, posterior somewhat produced and narrowed; dorsal margin well and evenly arched, ventral nearly straight; greatest height situated in the middle and equal to nearly half the length: seen from above, ovate, widest in the middle; at least twice as long as broad; right valve smaller than the left; extremities equal, subacuminate, abruptly tapered. Surface of the shell smooth. Colour creamy white, or yellowish and clouded with purple. Length  $\frac{1}{2}$  of an inch (1 millim.).

This species was the most abundant of the Ostracoda sent to me by Mr. Haly.

## CYPRIS HALYI, n. sp. (Plate XXXVIII. figs. 15-17.)

Shell, seen laterally, subtriangular, higher in front than behind; height equal to more than half the length; anterior extremity broad and evenly rounded, posterior also rounded, but much narrower; dorsal margin elevated and obtusely angulated in front of the middle, thence sloping steeply backwards, but more gently towards the front; ventral margin slightly convex: seen from above the outline is almost boat-shaped, widest just in front of the middle, tapering sharply to an acuminate extremity in front; posterior extremity wider, and showing on each valve a minute spine; width and height equal. Shell smooth, sculptured in a manner precisely like that of the European species *C. tessellata*, Fischer. Colour pale olive, with three or four indistinct transverse bands of a darker hue. Length  $\frac{1}{3}$  of an inch (.77 millim.).

It is curious that this species, so like *C. tessellata* in surface-markings, should likewise present the same peculiarities of form. It must, however, be borne in mind that a similar style of sculpture is met with in the young of some species (*C. obliqua*, Brady, *C. affinis*?, Fischer) and disappears, wholly or partially, in advanced life. It is therefore just possible that *C. Halyi* may be the young form of some other species. Only one specimen was observed.

## CYPRIS TENUICAUDA, n. sp. (Plate XXXVIII. figs. 18-20.)

Shell, seen laterally, reniform, about once and a half as long as broad, highest in the middle; extremities equal and well rounded; dorsal margin evenly arched, ventral slightly sinuated: seen from above the outline is ovate, widest behind, and gradually tapered towards the front; extremities rounded, anterior very narrow, almost acuminate, posterior very wide. Surface of the shell smooth, but not polished, and sometimes showing a few very short rigid hairs. Colour milky-white. Length  $\frac{1}{2}$  of an inch (.88 millim.). The postabdominal rami are unusually slender; the terminal claws very long.

## CYPRIS FURFURACEA, n. sp. (Plate XXXVIII. figs. 21-23 a.)

Shell tumid, subreniform: seen laterally, the extremities are broadly rounded, dorsal margin very boldly arched, sloping more gradually towards the front, ventral almost straight; greatest height in the middle, and equal to about two thirds of the length: seen from above, subelliptical, with rounded, obtuse extremities, somewhat narrower in front than behind; rather

more than twice as long as broad. Surface smooth, opaque; yellowish brown, with transparent patches. Length  $\frac{1}{45}$  of an inch (.55 millim.).

Genus *CHLAMYDOTHECA*, *De Saussure*.

(*Chlamydotheca*, *De Saussure*; ? *Cypridea*\*, *Bosquet*.)

*CHLAMYDOTHECA SUBGLOBOSA* (*Sowerby, fide Baird*). (Plate XXXVIII. figs. 24–27 *a*.)

*Cypris subglobosa*, *Baird, Proc. Zool. Soc.* 1859, pl. 63. fig. 2.

Shell subglobular, tumid: seen from the side, subovate, highest in the middle, height equal to quite half the length, anterior extremity obliquely rounded, posterior narrowed and somewhat produced, rounded off; dorsal margin evenly arched, sloping more steeply behind than in front, slightly sinuated toward either extremity; ventral margin almost straight: seen from above the outline forms almost a circle, with the anterior and posterior ends produced to acute angles, the anterior much the more attenuated of the two; width equal to three fourths of the length. The two valves are nearly equal, but the right is much more irregular and more angulated than the left; its anterior portion forms a sort of outgrowth, which is separated from the rest of the valve by a strongly marked sulcus; the ventral margin is deeply and abruptly sinuated near the middle, the posterior extremity forming a produced and somewhat angulated beak and bearing a series of more or less distinct serratures; similar teeth are found also at both

\* The following definition of the genus *Cypridea* is given by Professor T. Rupert Jones, F.R.S., in a paper, "On the Ostracoda of the Purbeck Formation" (*Quarterly Journal of the Geological Society*, August 1885, p. 336):—

"Carapace-valves subtriangular, obovate, or ovate-oblong; convex in the middle; broad (high) at the anterior third, narrower behind; one or both ends obliquely rounded; somewhat compressed anteriorly; notched at the antero-ventral angle, behind a small beak-like process; sometimes having only a slight indentation below, and behind a thickening of the antero-ventral angle; sometimes this is traceable only by a curvature of the edge inside. Edge-view more or less narrow-ovate; end-view subovate. Surface punctate, sometimes almost smooth, often tuberculate; tubercles small or large, variously disposed. The hinge-margin is definitely straight along the middle third or more of the dorsal edge, with the hinge-angles more or less defined, and is oblique to the main axis of the valve. The left valve is the largest, and receives the dorsal edge and a straight ridge of the other valve in grooves on its dorsal and ventral contact-margins, the outer edge of the ventral margin of the left valve overlapping that of the right valve. The ridges and furrows or ledges of contact vary in intensity in different individuals."



extremities of the left valve. The end view of the shell is triangular. Surface smooth, marked with large, closely-set punctures. Colour green. Postabdominal rami extremely slender. Length  $\frac{1}{15}$  of an inch (1.6 millim.).

This and *Cypris cylindrica* are the two most abundant species in Mr. Haly's gatherings.

Between this species and the published drawings and descriptions of Bosquet's genus *Cypridea* there are some not unimportant discrepancies, particularly the straight hinge-margin and ovate end-view of *Cypridea*. Moreover it would seem that the peculiar notch and produced beak of *Cypridea* are quite apparent when the two valves are in contact, which is scarcely the case in *C. subglobosa*. Indeed this character was not at all noticed by Dr. Baird. On the whole, though *C. subglobosa* must be recognized as forming a most interesting link between *Cypris* and *Cypridea*, we are perhaps scarcely warranted in referring it definitely to the latter genus. In the soft parts of the animal I cannot, after careful examination, discover anything to distinguish it from *Cypris*.

De Saussure's subgenus *Chlamydotheca*\* is founded upon a species presenting exactly the peculiar shell-formation of *C. subglobosa*; and as a matter of convenience it seems desirable to adopt the name either in a generic or subgeneric sense. Sir John Lubbock also has described a species, *Cypris brasiliensis*, belonging to the same group†.

The fossil specimens described by Mr. Sowerby, some of which Professor T. Rupert Jones has kindly allowed me to examine, are, I think, undoubtedly identical with Dr. Baird's Nagpur specimens and with those collected by Mr. Haly at Colombo. They are wonderfully well-preserved, and show the same sculpture as the recent form, the most important difference being that, when viewed from above, the anterior extremity is (in some cases at least) produced to a longer and more attenuated point.

#### Genus CYPRINOTUS, nov. gen.

Like *Cypris* except that the valves are very unequal, that of

\* *Cypris (Chlamydotheca) azteca*. Mémoire sur divers Crustacés nouveaux des Antilles et du Mexique, par M. Henri de Saussure (Mémoires de la Société de Physique et d'Histoire Naturelle de Genève, 1858).

† "On the Freshwater Entomostraca of South America" (Trans. Entom. Soc. Lond. iii. 1855).

the right side being extremely gibbous and overlapping the left in the middle of the dorsal margin. Hinge-margins without teeth.

CYPRINOTUS CINGALENSIS, n. sp. (Plate XXXVIII. figs. 28-30.)

Shell, seen laterally, subtriangular, greatest height situated in the middle and equal to nearly two thirds of the length; anterior extremity obliquely rounded and somewhat narrowed, posterior broad, rounded, but somewhat flattened; dorsal margin greatly elevated, the highest point being just a little behind the middle, thence sloping steeply and with a distinct sinuation towards both extremities, ventral margin gently convex: seen from above, the outline is ovate, compressed and pointed in front, rounded behind, twice as long as broad, the greatest width in the middle; the dorsal surface marked in the middle by a deep longitudinal furrow. The internal surfaces of both valves show large semilunar marginal flanges before and behind; the hinge-margins are simple and devoid of teeth; the left valve is finely hirsute on the anterior half of the ventral margin, which, however, bears no teeth, while that of the right valve is denticulated throughout its whole length, the teeth becoming gradually more pronounced towards the posterior extremity. The surface of the shell is smooth, and marked throughout with closely-set impressed puncta. Colour clouded gray, with diagonal bands of green on the posterior half. The soft parts of the animal are in all respects, so far as I have been able to ascertain, as in *Cypris*. Length  $\frac{1}{18}$  of an inch (1.4 millim.).

Four or five specimens were seen, all of them, I think, males.

The validity of genera founded solely on peculiarities of shell-structure may often be reasonably doubted, but in this case the divergence from the normal *Cypris* type is so marked as to make the separation unavoidable. Moreover some of the Ostracod genera, notably *Cypris* and *Cythere*, are becoming so unwieldy by reason of the large number of species referred to them, that some subdivision either into genera or subgenera is, or soon will be, a matter of necessity. And it is to be remembered that characters derived from the shell, in an important palæontological group like the Ostracoda, are valuable as being the only ones accessible to students of fossils.

Genus CYPRIDOPSIS, *G. S. Brady.*

CYPRIDOPSIS GLOBOSA, n. sp. (Plate XXXIX. figs. 1-3.)

Shell very tumid, almost globose: seen from the side, the outline is very broadly subovate, the greatest height in the middle, and equal to nearly three-fourths of the length; extremities broadly rounded; dorsal margin excessively arched, ventral slightly convex: seen from above, very broadly and regularly ovate, widest in the middle, width and height equal, extremities rounded, the anterior subacuminate. Surface marked with closely set impressed puncta and densely clothed with short, rigid hairs. Colour greyish white. Length  $\frac{1}{43}$  of an inch (.57 millim.).

This species is very like some unbanded forms of the European *C. vidua*, but the carapace is much more nearly globose, the height and width being greater in proportion to the length.

CYPRIDOPSIS MAEMORATA, n. sp. (Plate XXXIX. figs. 7-9.)

Shell very tumid, ovate, width slightly greater than the height: seen from the side elongated, subreniform, highest in the middle, height equal to about two-thirds of the length; anterior extremity narrowed, obliquely rounded; posterior well and broadly rounded; dorsal margin broadly arched, somewhat angulated in the middle, ventral almost straight: seen from above, ovate, widest in the middle, tapering and acuminate in front, broadly rounded behind. The end-view is almost circular, the width being slightly in excess of the height. Surface of the shell smooth. Colour greyish or yellowish white, marked with irregular wavy bands of black. Length  $\frac{1}{43}$  of an inch (.57 millim.).

Like the preceding, this comes very near to *C. vidua*, and in shape is even more like that species, but the surface-markings are much less regular in disposition, the lateral view is rather more elongated, and the shell is destitute of hairs, so far as can be seen in dried specimens.

PART II.—*Marine Species.*Genus PONTOCYPRIS, *G. O. Sars.*

PONTOCYPRIS NITIDA, n. sp. (Plate XXXIX. figs. 4-6.)

Shell, seen laterally, subtriangular, nearly twice as long as broad, highest a little in front of the middle; anterior extremity broadly

and evenly rounded, posterior attenuated and subacuminate; dorsal margin strongly arched and almost angular at its highest point, thence sloping evenly and with a steep curve in both directions, ventral slightly sinuated: seen from above, the outline is obovate, twice and a half as long as broad, broadest near the front, extremities obtusely pointed. Surface of the valves smooth and shining, milk-white, bearing numerous short, rigid, hair-like papillæ evenly distributed over the whole shell. Length  $\frac{1}{38}$  of an inch ('66 millim.).

One specimen only seen.

This species is very like *P. trigonella*, Sars, but is smaller, higher in proportion to its length, and more attenuated behind, while the surface is more polished, and instead of adpressed hairs has numerous minute processes of the true nature of which I am not quite certain, as they assume different appearances under different conditions of illumination; I think, however, that they are very minute setæ. *P. Davisoni*, Brady, is also nearly allied, but is more tumid and generally rounder in its outlines, besides being destitute of any special surface-ornament.

#### Genus BAIRDIA, *Mc Coy*.

BAIRDIA TENERA, n. sp. (Plate XXXIX. figs. 13-15.)

Shell, seen laterally, subreniform, highest in the middle; height equal to fully half the length; anterior extremity obliquely rounded, posterior produced into a not very prominent rounded beak; dorsal margin boldly and evenly arched, ventral sinuated in the middle: seen from above, compressed, lozenge-shaped, nearly thrice as long as broad, widest in the middle, thence tapering evenly to the extremities, which are subacuminate. Surface smooth, slightly granular, and bearing a few excessively short hairs. Length  $\frac{1}{35}$  of an inch ('75 millim.).

One specimen only was seen. The specimen has the appearance of an adult shell, but it is nevertheless quite possible that it may not be fully grown. Even so it can scarcely be referable to any described species.

#### Genus AGLAIA, *G. S. Brady*.

AGLAIA (?) ACUMINATA, n. sp. (Plate XL. figs. 1-3.)

Shell elongated, compressed, reniform, higher behind than in front: seen from the side it is nearly thrice as long as broad;

extremities well rounded, the posterior rather the wider of the two; dorsal margin almost straight, ventral deeply sinuated in front of the middle: seen from above, the outline is compressed, ovate, much tapered, and sharply acuminate in front, rounded behind, thrice as long as broad. Surface of the valves smooth, marked with numerous large circular papillæ. Length  $\frac{1}{5}$  of an inch (.46 millim.).

One specimen only of this species was observed.

Family CYTHERIDÆ.

Genus CYTHERE, Müller.

CYTHERE TRUNCATULA, n. sp. (Plate XXXIX. figs. 25-28.)

Carapace of the *female*, seen from the side, subquadrangular, rather higher in front than behind, height equal to more than half the length; anterior extremity broadly and rather obliquely rounded, posterior narrowed and abruptly truncated; dorsal margin straight in the middle, slightly curved towards the extremities, ventral sinuated in the middle and bent upwards behind: seen from above, ovate, twice as long as broad, widest behind the middle; posterior extremity moderately wide, rounded, anterior obtuse, subtruncate. Surface of the valves marked throughout with large, closely-set, and deep angular pits. Length  $\frac{1}{5}$  of an inch (.5 millim.). The shell of the *male* differs only in its more slender proportions, the height and width being less and the length rather greater.

This is an abundant species, and much resembles the European *C. villosa*, Sars, in its sculpture, though not in the shape of the shell.

CYTHERE FABACEA, n. sp. (Plate XL. figs. 4-6.)

Carapace of the *female*, seen from the side, somewhat siliquose, the postero-ventral angle being somewhat produced; extremities obliquely rounded and nearly equal, the posterior sloping steeply and with only a slight curvature; dorsal margin evenly arched and forming with the extremities one continuous curve, ventral sinuated in the middle; the antero-ventral angle is crenulated with about a dozen notches: seen from above, the outline is ovate, twice as long as broad, the greatest width in the middle; extremities rounded, obtuse. Surface smooth, marked with numerous large and closely-set subrotund pits. Length  $\frac{1}{45}$  of an

inch (.56 millim.). The *male* is rather larger and more slender in its proportions, and in many cases the sides of the shell show two median transverse furrows.

This, like the preceding, occurred in considerable numbers in Mr. Haly's gathering.

CY THERE RUPERTI, n. sp. (Plate XXXIX. figs. 16-18.)

? *Cythere cancellata*, in part, *Brady, Report on the Ostracoda of the 'Challenger' Expedition*, p. 73, pl. xiv. figs. 9, *d, e*.

Shell, seen laterally, elongated, subquadrate, very slightly higher in front than behind; height equal to somewhat less than half the length; anterior extremity obliquely rounded, bordered below the middle and round the ventral angle with a series of about twelve short, blunt, and equal teeth; posterior obliquely truncated above the middle, rounded and finely denticulated below; dorsal margin nearly straight, sloping slightly from before backward, ventral gently sinuated in the middle: seen from above, ovate, more than twice as long as broad, obtusely pointed and emarginate in front, rounded behind and produced into a wide central mucro. The valves are bordered before and behind with a flattened lip or flange, which extends partially to the dorsal and ventral margins. The surface is sculptured with distinct rounded pits in young and middle-aged specimens, but in old ones these tend to run into wavy transverse furrows; there is usually also a large central tubercle with a deep sulcus in front and behind. Length  $\frac{1}{30}$  of an inch (.85 millim.).

This is a pretty and well-marked species which I have pleasure in naming after my friend Professor T. Rupert Jones, F.R.S. In the Calpentyn dredging it occurs abundantly, and in many stages of growth. The ornamentation of the shell is almost exactly as in *C. fabacea*, but its general contour is very different, the differences being well marked at all ages.

CY THERE CANCELLATA, *G. S. Brady*.

*Cythere cancellata*, *Brady, Les Fonds de la Mer* (1868); *Report on the Ostracoda of the 'Challenger' Expedition*, p. 73 (1880).

The type specimens of this species were from Java, those of the 'Challenger' Expedition from Booby Island and Tongatabu. Two figures (plate xiv. fig. 9, *d, e*) given in the 'Challenger' Report are referable, I think, not to *C. cancellata*, but to the species here described as *Cythere Ruperti*; of this, however—the specimens not being at hand—I cannot be quite sure.

## CYTHERE SUBCUNEATA, n. sp. (Plate XXXIX. figs. 29-30.)

Shell, seen from the side, elongated, subcuneiform, higher in front than behind; height scarcely equal to half the length; anterior extremity very obliquely rounded, posterior narrowed, obliquely truncated, and slightly produced at the ventral angle; dorsal margin elevated at the anterior third, thence sloping with a slightly sinuous curve backwards, steeply and with a regular curve to the front; ventral margin gently sinuated: seen from above, the outline is regularly ovate, widest in the middle, more than twice as long as broad; extremities rather wide, subacuminate. Shell-surface marked with numerous shallow circular pits with rounded papillæ in the interspaces, the pits coalescing into furrows on the anterior and ventral surfaces. Length  $\frac{1}{35}$  of an inch (.75 millim.).

This species is represented in the Calpentyng gathering by several specimens.

## CYTHERE CORALLOIDES, n. sp. (Plate XXXIX. figs. 19-22.)

Shell, seen laterally, subquadrate, twice as long as broad, greatest height situated near the front; anterior extremity obliquely rounded, its lower half bordered with short equal teeth, posterior truncated, slightly emarginate above the middle but not toothed; dorsal margin forming an elevated angle over the anterior hinge-tubercle (which is large and glistening), thence sloping in an irregular sinuous line to the posterior extremity; ventral margin nearly straight: seen from above, broadly ovate, widest behind the middle, scarcely twice as long as broad; posterior extremity wide and rounded, with a broad median prominence, anterior narrow, subtruncate. Surface of the shell marked everywhere with coarse angular impressions, and having one or more indistinct, flexuous, longitudinal ribs on the lateral aspect of the valves. Length  $\frac{1}{33}$  of an inch (.77 millim.).

There are two forms of this species:—one, from which the description has been drawn up, tumid and rounded in its outlines, the other (probably the male) smaller, more slender, and angular. Both of these forms are here figured. If the more slender form be really the male, it is probably not full-grown, inasmuch as the males of *Cythere* are usually longer than the females. All these angular specimens are, however, in this case smaller than the rounded ones.

CYTHERE PAPUENSIS, *G. S. Brady.*

*Cythere papuensis*, *Brady*, *Report on the Ostracoda of the 'Challenger' Expedition*, p. 95, pl. xxv. figs. 5 a-d.

CYTHERE GOUJONI, *G. S. Brady.*

*Cythere Goujoni*, *Brady*, *Les Fonds de la Mer*, tom. i. p. 78, pl. x. figs. 9, 10; *Report on the Ostracoda of the 'Challenger' Expedition*, p. 96, pl. xxv. figs. 7 a-g.

CYTHERE STIMPSONI, *G. S. Brady.* (Plate XXXIX. figs. 23, 24.)

*Cythere Stimpsoni*, *Brady*, *Les Fonds de la Mer*, t. i. p. 78, pl. x. figs. 7, 8.

Shell, seen from the side, quadrangular, somewhat higher in front than behind, height equal to more than half the length; anterior extremity obliquely rounded, and bearing numerous small teeth, posterior rectangularly truncated, produced abruptly below the middle, the produced portion divided into four or five stout teeth, which project directly backward; dorsal margin straight, forming an elevated angle over the hinge-tubercle, ventral straight, curved upwards at the posterior extremity: seen from above, oblong, subhastate, widest behind the middle, twice as long as broad; anterior extremity obtuse, with two mucronate processes, posterior wide, truncated, with a broad dentated central projection. Surface irregularly tuberculated and pitted, and having on the lateral aspect of the valves three prominent, compressed, flexuous, longitudinal ribs, one of these being coincident with the dorsal margin, and ending abruptly a little in front of the middle; hinge-tubercles prominent and glistening. Ventral surface quite flat. Length  $\frac{1}{4}$  of an inch (.65 millim.).

Two specimens only of this species were seen. The type specimen, sent to me by M. le Marquis de Folin, passed out of my possession after being described, and the figures given in 'Les Fonds de la Mer' are by no means satisfactory. I can scarcely doubt, however, that these Ceylon shells belong to the same species, and that the Mediterranean form referred by me to *C. Stimpsoni* (*Ann. & Mag. Nat. Hist. passim*) ought to be renamed as a distinct species. I therefore propose to call it after my friend the Rev. Dr. A. M. Norman, *Cythere Normaniana*.

CYTHERE DARWINI, *G. S. Brady.*

*Cythere Darwini*, *Brady*, *Les Fonds de la Mer*, tom. i. p. 71, pl. viii. figs. 17, 18; *Report on the Ostracoda of the 'Challenger' Expedition*, p. 97, pl. xxv. figs. 2 a-g.



CYTHERE MELOBESIOIDES, *G. S. Brady.*

*Cythere melobesioides*, *Brady, Les Fonds de la Mer*, tom. i. p. 162, pl. xix. figs. 10, 11; *Report on the Ostracoda of the 'Challenger' Expedition*, p. 108, pl. xviii. figs. 1 *a, g.*

*Cythere nodulifera*, *Brady, Les Fonds de la Mer*, tom. i. p. 163, pl. xix. figs. 24, 25.

CYTHERE LACTEA, *G. S. Brady.*

*Cythere lactea*, *Brady, Trans. Zool. Soc.* (1865) vol. v. p. 377, pl. lx. figs. 3 *a-c*; *Report on the Ostracoda of the 'Challenger' Expedition*, p. 91, pl. xxii. figs. 1 *a-d.*

CYTHERE BIMAMILLATA, *n. sp.* (Plate XL. figs. 10-12.)

Carapace very tumid, ventricose: seen from the side, quadrangular, height equal to nearly two thirds of the length and about the same throughout; anterior extremity obliquely rounded, posterior truncated, scarcely rounded and nearly as wide as the anterior; dorsal margin almost straight, very slightly inclined from before backwards, ventral straight: seen from above, the shell is of an irregular lozenge-shape, greatest width equal to three fourths of the length, and situated near the middle, where the lateral margins form strongly projecting angles, converging sharply towards the subacute anterior extremity and scarcely at all towards the posterior, which is wide and truncated; ventral surface flattened. Shell-surface closely set with circular impressed puncta; the centre of each valve has a strongly marked irregular elevation, and the postero-dorsal angle has a similar but much smaller nodule. Length  $\frac{1}{58}$  of an inch (.43 millim.).

CYTHERE LAQUEATA, *n. sp.* (Plate XXXIX. figs. 34-36.)

Shell, seen from the side, oblong, subovate, twice as long as high, height nearly equal throughout, or only very slightly higher in front, extremities obliquely rounded, the posterior flattened; dorsal margin almost straight, ventral slightly sinuated in the middle: seen from above, oblong, subhastate, greatest width in the middle and equal to less than half the length, tapering with a gentle curve to the broadly pointed anterior extremity; posterior extremity truncated, with a wide emarginated median prominence. Surface smooth; a small rounded tubercle in the middle of each valve, and four flexuous, not very prominent longitudinal ribs, which unite in loops in front and behind. Length  $\frac{1}{30}$  of an inch (.85 millim.).

CY THERE RECTANGULARIS, *G. S. Brady*. (Plate XL. figs. 7-9.)  
*Cythere rectangularis*, *Brady*, *Les Fonds de la Mer*, t. i. p. 153, pl. 18.  
 figs. 13, 14. (Not *rectangularis (Audei)* of 'Challenger' Report.)

Shell oblong, much compressed: seen from the side it is irregularly angular and somewhat ear-shaped, much higher in front than behind, length equal to about twice the height; anterior extremity wide and obliquely rounded, posterior narrow, obliquely truncated and deeply emarginate; dorsal margin arched, evenly curved in front, sloping steeply backwards, and deeply hollowed in front of the posterior angle, which is very prominent and almost rectangular; ventral margin deeply sinuated: seen from above, the outline is extremely irregular, about twice as long as broad, the extremities much produced, attenuated, and sharply pointed, lateral margins deeply indented at three points, the posterior indentation rectangular. Surface of the shell irregular; a strong rounded rib running parallel to and just inside the margins, but most conspicuous at the posterior and ventral edges. Length  $\frac{1}{50}$  of an inch (.5 millim.).

This is the most abundant species in the Calpenty n gathering. The figure of it given in 'Les Fonds' shows very fairly the general character of the shell. The type, however, as in the case of *C. Stimpsoni*, is no longer accessible to me, and I am glad by means of this good series of specimens to be able to place the species on a more secure foundation. The synonym *rectangularis*, given in the 'Challenger' Report under *C. Audei*, must be withdrawn.

CY THERE HODGII, *G. S. Brady*.

*Cythere Hodgii*, *Brady*, *Trans. Zool. Soc.* vol. v. (1865) p. 373, pl. 59.  
 figs. 3 a, b; *Report on the Ostracoda of the 'Challenger' Expedition*,  
 p. 94, pl. xxv. figs. 1 a-d.

A single specimen, very closely resembling the type described in the 'Zoological Transactions,' occurred in the Calpenty n dredging. It is, however, very different from the specimens so named in the 'Challenger' Report, which, if they belong to the same species, must be very much older shells. It is probable that they should receive a fresh name; but a larger series of the Ceylon form, in different stages of growth, is requisite to settle the question.

CY THERE INIQUA, *G. S. Brady*. (Plate XXXIX. figs. 31-33.)  
*Cytherura bataviana*, *Brady*, *Les Fonds de la Mer*, t. i. p. 65, pl. 8. figs. 7-9.  
*Cythere iniqua*, *id. ibid.* p. 64, pl. 8. figs. 3-6.

Shell of the male, seen laterally, oblong, obliquely quadrate, of equal height throughout, height equal to half the length; anterior extremity obliquely rounded and fringed with about six small triangular teeth; posterior extremity oblique, rounded off below, bearing a short sharp spine in the middle, and usually one smaller one above, upper half of the margin obliquely truncate; dorsal margin nearly straight, ventral straight in front, curving upwards behind: seen from above, oval, with acuminate extremities, twice as long as broad, a slight angular alate prominence on each side behind the middle: end-view almost square with rounded angles, dorsal margin centrally emarginate, ventral keeled. Surface marked with a rather coarse, raised, reticulated pattern, and with two longitudinal crests, one obliquely in the middle line of the valve, the other just within the ventral margin and ending in a sharp angle behind the middle, forming, when seen from below, a slight lateral ala; there is also a deep transverse furrow across the middle of each valve. Length  $\frac{1}{42}$  of an inch (.6 millim.).

This was the most abundant species in the Calpentyn dredging. It is larger than the ordinary run of *Cytheruræ*, has no central areola, and on the whole seems to come more appropriately under *Cythere*, though the posterior beak gives it an appearance similar to *Cytherura*. I do not now see any sufficient reason for the separation of *C. bataviana* and *C. iniqua*.

#### Genus CYTHERIDEA, *Bosquet*.

CYTHERIDEA ORIENTALIS, n. sp. (Plate XL. figs. 16-18.)

Shell, seen from the side, oblong, subovate, highest in the middle; height scarcely equal to half the length; anterior extremity rounded, posterior narrower, rounded off at the ventral angle; dorsal margin arched, sloping with a very gentle curve to the front, and much more steeply behind, ventral slightly sinuated: seen dorsally, the outline is ovate, widest in the middle, more than twice as long as broad, tapering equally to the extremities, which are pointed. Surface smooth, polished, marked with numerous circular, hair-like papillæ. Colour whitish or creamy. Length  $\frac{1}{25}$  of an inch (1 millim.).

CYTHERIDEA PUSILLA, n. sp. (Plate XL. figs. 13-15.)

Shell rather tumid, ovate: seen from the side, about twice as long as broad, highest in the middle; anterior extremity obliquely

rounded, posterior subtruncate; dorsal margin feebly arched, ventral almost straight: seen from above, ovate, not twice as long as broad, widest in the middle; extremities rounded, the anterior the narrower of the two. Surface of the shell smooth, marked towards the front with a few faint curved, concentric grooves, and thickly dotted with short hair-like papillæ. Length  $\frac{1}{50}$  of an inch (.5 millim.)

Possibly an immature form, but not referable, I think, to any described species.

Genus LOXOCONCHA, *G. O. Sars.*

LOXOCONCHA SAGITTALIS, n. sp. (Plate XL. figs. 19–21.)

Shell of the *male* (?), seen from the side, oblong, obliquely subquadrangular, scarcely twice as long as high, and of nearly equal height throughout; extremities equal and obliquely rounded; dorsal and ventral margins nearly parallel, dorsal slightly sinuous, ventral straight: seen from below, ovate, pointed, and tapered in front; posterior extremity wide, rounded, with a central keel; each lateral margin has just behind the middle an acute-angled alæform projection, running forwards into a sharp crest, and giving the anterior half of the shell the shape of an arrowhead. Surface of the shell irregularly rugose and bearing numerous, rather large, circular papillæ. Length  $\frac{1}{42}$  of an inch (.6 millim.).

Two specimens only of this species were observed,—one an elongated angular form, which I suppose to be the male; the other shorter, broader, and more rounded in outline, probably the female.

LOXOCONCHA ALATA, *G. S. Brady?*

*Loxoconcha alata*, *Brady, Ann. & Mag. Nat. Hist.* ser. 4, vol. ii. (1868), p. 223, pl. xiv. figs. 8–13.

The Calpentyn specimens have a less developed lateral ala, and are more coarsely punctate, but in other respects so closely approach the types that it seems best to take them as belonging to this species. The specimens referred in the 'Challenger' Report to *L. alata* are different, and are, I think, identical with the next species.

LOXOCONCHA GIBBERA, n. sp. (Plate XL. figs. 25–27.)

*Loxoconcha alata*, *Brady, Report on the Ostracoda of the 'Challenger' Expedition*, p. 122, pl. xxvii. figs. 6 a–j.

Carapace tumid; seen from the side, obliquely quadrangular; height the same throughout and equal to about two thirds of the length; anterior extremity obliquely rounded, posterior obliquely rounded below, produced into an obtuse beak near the middle, obliquely truncate above; dorsal margin straight, with a very prominent angulated hump at the posterior extremity, ventral straight: seen from above, the outline resembles that of two triangles applied to each other by their bases—a large one in front, a smaller behind; the greatest width equal to three fourths of the length, extremities subacuminate; end-view irregular, height somewhat less than the width, broadest at the base; dorsal margin broad and irregularly arched. Surface of the shell closely set with coarse impressed punctures; hinge-tubercle glistening and prominent; a large, round, alæform process behind the middle of the valve just within the ventral margin, and a large angular prominence at the posterior end of the hinge-margin. Length  $\frac{1}{55}$  of an inch (.46 millim.).

*LOXOCOONCHA AVELLANA*, G. S. Brady.

*Normania avellana*, Brady, *Trans. Zool. Soc.* vol. v. (1865), p. 382, pl. lxi. figs. 15 a-c.

*Loxococoncha avellana*, Brady, *Report on the Ostracoda of the 'Challenger' Expedition*, p. 117, pl. xxviii. figs. 1 a-f.

These specimens are more tumid than the type (West Indies), but less tumid than those from Australia, figured in the 'Challenger' Report.

*LOXOCOONCHA PAPPILLOSA*, n. sp. (Plate XL. figs. 33, 34.)

Carapace seen from the side rhomboidal, height equal to more than two thirds of the length, slightly higher behind than in front; anterior extremity rounded, posterior obliquely truncated and forming a very slightly produced beak at the dorsal angle; dorsal margin very gently arched, ventral straight; all the angles except the postero-dorsal well rounded: seen from above, ovate, fully twice as long as broad, widest in the middle, extremities broadly pointed, the posterior more produced and tapered than the anterior. End-view ovate. Surface smooth and polished; ornamented with numerous closely-set raised circular papillæ. Length  $\frac{1}{50}$  of an inch (.5 millim.).

*LOXOCOONCHA ELONGATA*, n. sp. (Plate XL. figs. 31, 32.)

Carapace, seen from the side, elongated, flexuous, of equal

height throughout; height equal to half the length; extremities obliquely rounded, the anterior somewhat the narrower of the two; dorsal margin straight, almost angular behind, and gently rounded off in front, ventral also nearly straight, but upcurved behind: seen from above, ovate, twice as long as broad, with nearly equal and acuminate extremities, the anterior extremity more tapering than the posterior, widest in the middle. Surface rather coarsely sculptured with closely-set rounded fossæ. Length  $\frac{1}{45}$  of an inch (.54 millim.).

Genus XESTOLEBERIS, *G. O. Sars.*

XESTOLEBERIS CURTA, *G. S. Brady.*

Cytheridea (?) curta, *Brady, Trans. Zool. Soc.* 1865, vol. v. p. 370, pl. lviii. figs. 7 a, b.

Xestoleberis curta, *Brady, Les Fonds de la Mer*, t. i. p. 79, pl. x. figs. 16-18; *Report on the Ostracoda of the 'Challenger' Expedition*, p. 126, pl. xxxi. figs. 6 a-d.

XESTOLEBERIS INTERMEDIA, *G. S. Brady?*

Xestoleberis intermedia, *Brady, Les Fonds de la Mer*, t. i. p. 94, pl. xii. figs. 3-7; *Report on the Ostracoda of the 'Challenger' Expedition*, p. 128, pl. xxxiii. figs. 2 a-d.

XESTOLEBERIS VARIEGATA, *G. S. Brady.*

Xestoleberis variegata, *Brady, Report on the Ostracoda of the 'Challenger' Expedition*, p. 129, pl. xxxi. figs. 8 a-g.

XESTOLEBERIS TUMEFACATA, *G. S. Brady.*

Xestoleberis tumefacta, *Brady, Report on the Ostracoda of the 'Challenger' Expedition*, p. 128, pl. xxxi. figs. 4 a-d.

XESTOLEBERIS SULCATA, n. sp. (Plate XL. figs: 28-30.)

Shell, seen from the side, oblong, subreniform, greatest height in the middle and equal to more than half the length; anterior extremity narrow, rounded, posterior broad, obliquely subtruncate; dorsal margin gently arched, highest in the middle, where it is almost angulated, ventral slightly sinuated: seen from above, ovate, not quite twice as long as broad, widest behind the middle, subacuminate in front, broadly rounded behind: end-view very broadly ovate, almost circular, dorsum pointed. Surface of the shell smooth or slightly papillose, sometimes slightly setose, marked round the margins and on the ventral surface with distinct longitudinal furrows. Length  $\frac{1}{44}$  of an inch (.55 millim.).

Genus BYTHOCY THERE, *G. O. Sars.*

BYTHOCY THERE RETUSA, n. sp. (Plate XL. figs. 22-24.)

Shell, seen from the side, oblong, twice as long as broad, slightly higher in front than behind; anterior extremity rounded, posterior obliquely rounded off below the middle, where it forms an obtuse angle, obliquely truncated and emarginate above; dorsal margin straight, ventral gently convex: seen from below, the outline is ovate, twice as long as broad, widest in the middle; extremities strongly mucronate: end-view very irregular. The valves are slightly papillose, have a deep transverse furrow near the middle, and a sharp longitudinal crest in the middle line behind the furrow, also in the middle of each ventral margin a prominent curved ridge or ala, which ends behind in a sharp angle; anterior hinge-tubercle prominent; ventral surface flat, keeled, and longitudinally grooved. Length  $\frac{1}{38}$  of an inch (.66 millim.).

Genus PARADOXOSTOMA, *Fischer.*

PARADOXOSTOMA CINGALENSE, n. sp. (Plate XL. figs. 35, 36.)

Carapace compressed, oblong; seen from the side, thrice as long as broad, greatest height in the middle; anterior extremity depressed and rounded, posterior produced into a broad, obtuse beak; dorsal margin boldly arched, ventral sinuous: seen from above, oblong-ovate, quite four times as long as broad, widest in the middle and tapering evenly to the extremities, which are sharply pointed. Surface smooth, without markings. Length  $\frac{1}{37}$  of an inch (.7 millim.).

## DESCRIPTION OF THE PLATES.

## PLATE XXXVII.

- Figs. 1-3. *Limnadia Hislopi*, Baird. 1. Entire animal, magnified. 2. Head and antennæ, more highly magnified. 2a. Serratures of anterior part of head, still further enlarged. 3. Abdominal rami, also highly magnified.
- Figs. 4 & 5. *Moina submucronata*, n. sp. 4. Animal, seen laterally, magnified. 5. Abdomen, more highly magnified.
- Figs. 6-9. *Ilyocryptus Halyi*, n. sp. 6. Animal, seen laterally, magnified. 7. Portion of upper branch of posterior antenna, more highly magnified. 8. Abdomen, ditto. 9. Some of the spines of the abdomen, more highly magnified.
- Figs. 10-15. *Attheyella cingalensis*, n. sp. 10. Anterior antenna of female. 11. Secondary branch of posterior antenna of same. 12. Foot of

first pair. 13. Foot of fourth pair. 14. Foot of fifth pair. 15. Posterior abdominal and caudal segments. All the figures greatly enlarged.

Figs. 16-20. *Macrothrix triserialis*, n. sp. 16. Animal seen from behind. 17. Side view of animal, both much magnified. 18. Anterior portion of head and anterior antenna, further enlarged. 19 & 20. Serratures of the ventral margins of the carapace, greatly magnified.

Figs. 21-26. *Diaptomus orientalis*, n. sp. 21. Female, seen from behind, magnified. 22. Anterior antenna of female. 23. Right anterior antenna of male. 24. Right foot of male. 25. Fifth foot of female. 26. Abdomen and caudal extremity of male. All very considerably magnified.

#### PLATE XXXVIII.

- Fig. 1. *Alona acanthocercoides*, Fischer. Animal, seen laterally, magnified.  
 Figs. 2-4. *Cyclops*, sp.? 2. Anterior antenna of female. 3. Fifth foot. 4. Tail with setæ. All magnified.  
 Figs. 5-7. *Cypris Malcolmsoni*, n. sp. 5. Postabdominal ramus. 6. Shell, from left side; 7, from above.  
 Figs. 8-11. *Cypris luxata*, n. sp. Shell, in different views: 8, Left side, 9, right side, 10, from above, 11, front view.  
 Figs. 12-14. *Cypris purpurascens*, n. sp. Shell: 12, left side, 13, from above, 14, front view.  
 Figs. 15-17. *Cypris Halyi*, n. sp. 15. Left side, 16, from above, 17, front view.  
 Figs. 18-20. *Cypris tenuicauda*, n. sp. Shell: 18, left side, 19, from above, 20, front view.  
 Figs. 21-23 a. *Cypris furfuracea*, n. sp. Shell: 21, left side, 22, from above, 23, front view. 23 a. A small portion of the shell-surface, much more highly magnified.  
 Figs. 24-27 a. *Chlamydotheca subglobosa*, Sowerby. Shell. 24. Right valve, seen from inside. 25. Left valve, inside view. 26. Both valves, from above. 27. Both valves, front view.  
 Figs. 28-30. *Cyprinotus cingalensis*, n. sp. Shell: 28, left side, 29, from above, 30, front view.

#### PLATE XXXIX.

- Figs. 1-3. *Cypridopsis globosa*, n. sp. Shell: 1, left side, 2, from above, 3, front view.  
 Figs. 4-6. *Pontocypris nitida*, n. sp. Shell: 4, right side, 5, from above, 6, front view.  
 Figs. 7-9. *Cypridopsis marmorata*. Shell: 7, left side, 8, from above, 9, front view.  
 Figs. 10-12. *Cypris monilifera*, n. sp. Shell: 10, right side, 11, from above, 12, front view.  
 Figs. 13-15. *Bairdia tenera*, n. sp. Shell: 13, left side, 14, from above, 15, front view.  
 Figs. 16-18. *Cythere Ruperti*, n. sp. Shell: 16, left side, 17, from above, 18, front view.  
 Figs. 19-22. *Cythere coralloides*, n. sp. Shell of male: 19, left side, 20, from above. Shell of female: 21, left side, 22, from above.  
 Figs. 23, 24. *Cythere Stimpsoni*, Brady. Shell: 23, left side, 24, from above.  
 Figs. 25-28. *Cythere truncatula*, n. sp. Shell of male: 25, left side, 26, from above. Shell of female: 27, left side, 28, from above.



- Figs. 29, 30. *Cythere subcuneata*, n. sp. Shell: 29, left side, 30, from above.  
 Figs. 31-33. *Cythere iniqua*, Brady. Shell: 31, right side, 32, from above,  
 33, front view.  
 Figs. 34-36. *Cythere laqueata*, n. sp. Shell: 34, right side, 35, from above,  
 36, front view.

## PLATE XL.

- Figs. 1-3. *Aglaiia acuminata*, n. sp. Shell: 1, right side, 2, from above,  
 3, front view.  
 Figs. 4-6. *Cythere fabacea*, n. sp. Shell: 4, left side, 5, from above, 6, front  
 view.  
 Figs. 7-9. *Cythere rectangularis*, Brady. Shell: 7, left side, 8, from above,  
 9, front view.  
 Figs. 10-12. *Cythere binamillata*, n. sp. Shell: 10, left side, 11, from above,  
 12, front view.  
 Figs. 13-15. *Cytheridea pusilla*, n. sp. Shell: 13, right side, 14, from above,  
 15, front view.  
 Figs. 16-18. *Cytheridea orientalis*, n. sp. Shell: 16, left side, 17, from above,  
 18, front view.  
 Figs. 19-21. *Loxococoncha sagittalis*, n. sp. Shell: 19, right side, 20, from below,  
 21, front view.  
 Figs. 22-24. *Bythocythere retusa*, n. sp. Shell: 22, left side, 23, from below,  
 24, front view.  
 Figs. 25-27. *Loxococoncha gibbera*, n. sp. Shell: 25, left side, 26, from above,  
 27, front view.  
 Figs. 28-30. *Xestoleberis sulcata*, n. sp. Shell: 28, left side, 29, from above,  
 30, front view.  
 Figs. 31 & 32. *Loxococoncha elongata*, n. sp. Shell: 31, right side, 32, from above.  
 Figs. 33 & 34. *Loxococoncha papillosa*, n. sp. Shell: 33, left side, 34, from  
 above.  
 Figs. 35 & 36. *Paradoxostoma cingalense*, n. sp. Shell: 35, left side, 36, from  
 above.

(All the figures of the Ostracoda are moderately magnified, the scale varying from about ten to forty diameters.)







